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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,908	10/02/2006	Kenric B. Rose	8411.1120	4740

57656 7590 06/21/2011

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EXAMINER	
DUONG, THO V	
ART UNIT	**PAPER NUMBER**
3744	

MAIL DATE	DELIVERY MODE
06/21/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/572,908	ROSE, KENRIC B.	
	Examiner	Art Unit	
	THO V. DUONG	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5,8-10,13,15,25-28 and 32-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *35-38* is/are allowed.

6)☒ Claim(s) *1,3-5,8-10,13 and 15* is/are rejected.

7)☒ Claim(s) *25 and 34* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, see applicant's remark, filed 3/23/11, with respect to the rejection(s) of claim(s) 26-28,32-33 under Michel in view of Carlson have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Michel in view of Bromell et al. (US 4,188,787).

Regarding claims 1,3-5,8-10,13,15 and 25, applicant's arguments filed 3/23/11 have been fully considered but they are not persuasive. Applicant's argument that Carter's accumulator and Dalin's accumulator is not a hydraulic fluid accumulator, has been very carefully considered but is not found to be persuasive. Firstly, the examiner is reminded that the examiner must interpret the limitation as broadly as it reasonably allows. In this case, the applicant does not define any where in the specification that the term "hydraulic fluid accumulator" must positively contains fluid under pressure. Therefore, it is reasonable for the examiner to interpret the term "hydraulic fluid accumulator" as any container that holds a hydraulic fluid. Both reference to Carter and Dalin disclose rigid containers that hold water, which is a hydraulic fluid. Moreover, for a sake of argument, the water contained in both Carter and Dalin's container is also considered to be under pressure by its own weight as one can see that the water is contained in an elevation in term of a vertical column of water. (See figure 2 and 2 of Carter and Dalin respectively).

Regarding the cooling passage (18) of Dalin, applicant's argument that cooling passage is not for cooling the hydraulic fluid accumulator, has been very carefully considered but is not

found to be persuasive. Applicant is advised to see column 5, lines 11-21 of Dalin that fresh air flow through the cooling passage (18) to abstract heat from hot water in the tank.

Regarding claim 9, applicant's argument that the resilient material of Rain is not appropriate material in a heated environment of the water heater, has been very carefully considered but is not found to be persuasive. Rain discloses (column 3, lines 10-16) that the helical spacer (12) can be a resilient material such as rubber, plastic or the like and further state that the materials of which should be resistant to whatever gas or liquid are transported though the piping system. Therefore, it would have been obvious to one having ordinary skill in the art that one would chose the material that has a high melting temperature depending on the intended application to avoid the resilient material to be destroyed by the fluid.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3-5,8,13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by R. H. Carter (US 2,847,193). Carter discloses (figures 1-3) a pressure vessel assembly comprising an enclosed outer casing (4-6); at least one internal tube (3) extending within the outer casing; at least one hydraulic fluid accumulator of any type (1,2) disposed within the at least one internal tube with a clearance; at least one cooling passage provided adjacent to the hydraulic fluid accumulator for receiving a flow of a cooling fluid there through for cooling the at least one

hydraulic fluid accumulator; the at least one cooling passage formed within the internal tube and defined by the clearance between the internal tube and the accumulator (1,2); a spiral (8) wrapping between the internal tube and the accumulator; the outer casing includes a substantially tubular housing (4) and end members (5,6) at opposite distal end of the housing; wherein the internal tube extend between and through the end members; the pressure vessel assembly defines a compartment there within between the outer casing and the internal tube; the compartment at least partially filled with a hydraulic working fluid.

Claims 1,3-5, 10 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by D. Dalin (US 2,822,136). Dalin discloses (figures 1-5 and column 3, lines 57-75) a pressure vessel assembly comprising an enclosed outer casing (20); at least one internal tube (21 or 16) extending within the outer casing; at least one hydraulic fluid accumulator of any type (9) disposed within the at least one internal tube with a clearance; at least one cooling passage (18) provided adjacent to the hydraulic fluid accumulator for receiving a flow of a cooling fluid there through for cooling the at least one hydraulic fluid accumulator; the at least one cooling passage formed within the internal tube and defined by the clearance between the internal tube and the accumulator (9); the outer casing includes a substantially tubular housing (20) and end members (top and bottom) at opposite distal end of the housing; wherein the internal tube extend between and through the end members; a fan (28) is provided to force air through the cooling passage.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over H. Carter (US 2,847,193) in view of Rains (US 5,127,441). Carter substantially discloses all of applicant's claimed invention as discussed above except for the limitation that the spiral wrapping is made of an elastomeric material. Rains discloses (column 3, lines 9-15 and lines 35-43) a coaxial piping system that has a spiral wrapping (12) is made of resilient material such as rubber for a purpose of absorbing vibrations that occur through the use of the device to prevent stress fracture that would be caused by such vibration. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Rains' teaching in Carter's device for a purpose of absorbing vibrations that occurs through the use of the device to prevent stress fracture that would be caused by such vibration.

Claims 8- 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalin (US 2,822, 136) in view of Rains (US 5,127,441). Dalin substantially discloses all of applicant's claimed invention as discussed above except for the limitation that a spiral wrapping is made of an elastomeric material, located between the inner tube and the accumulator. Rains discloses (column 3, lines 9-15) a coaxial piping system that has a spiral elastomeric wrapping (12) located within the coaxial passage for a purpose of increasing the length of the concentric flow path, which in turn to enhance the heat exchanging performance of the device and also absorbing vibrations that occur through the use of the device to prevent stress fracture that would be

caused by such vibration. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Rains' teaching in Carter's device for a purpose of absorbing vibration that occurs through the use of the device to prevent stress fracture that would caused by such vibration.

Claims 26-28 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michel (US 4,520,840) in view of Bromell et al. (US 4,188,787). Michel discloses (figures 1-3 and column 1, lines 55-60) a pressure vessel assembly comprising an enclosed outer casing (7); at least one hydraulic fluid accumulator (1) disposed within the outer casing; a compartment (16) under a low pressure, is located within the pressure vessel assembly between the outer casing and the at least one hydraulic fluid accumulator; the compartment being fluid communication with the at least one hydraulic fluid accumulator so as to selectively transfer the hydraulic working fluid between the compartment and the at least one hydraulic fluid accumulator; the outer casing includes a substantially tubular housing and end members (8,9) secured at opposite distal end of the housing; the accumulator include an internal tube extending between the end members (8,9); the end members (8,9) are also considered to read as the internal baffles; a hydraulic machine (25) having a first port fluidly connected to at least one hydraulic fluid accumulator and a second port fluidly connected to the working fluid in the compartment (figure 3 show the connection between machine 25 and the high and the low pressure fluid). Michel does not disclose that the working fluid of the system is hydraulic oil and a pressurized gas reservoir external to the outer casing. Michel discloses that the compartment is under pressure but not disclose the source of the pressure. Bromell discloses (figure 1, column 7, lines 13-38 and column 15, lines 6-11) a hydraulic system that has a hydraulic fluid stored in the accumulator (40 or 22) that is under

pressure, wherein the pressure source comes from pressurized nitrogen, helium or air, which can be stored in a gas tank for a purpose of providing a pressure source to a hydraulic fluid compartment to be used in a hydraulic system. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Bromell's teaching in Michel's device for a purpose of providing a pressure source to a hydraulic fluid compartment to be used in a hydraulic system. Regarding claim 28, it has been known in the art that a common hydraulic fluid is mineral oil. (See Wikipedia for hydraulic fluid) and other type of oil such as petroleum based oil is well known in the art to be used as a hydraulic fluid. (See Starr US 4,385,909, column 1, lines 10-15). Therefore, it would have been obvious to one having ordinary skill in the art to employ mineral or petroleum base oil as a hydraulic fluid in the combination device of Michels and Bromell since it has been well known in the art that mineral oil or petroleum base oil is a common hydraulic fluid.

Allowable Subject Matter

Claims 35-38 are allowed.

Claim 25 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Starr (US 4,385,909) discloses a petroleum base oil has a hydraulic fluid.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THO V. DUONG whose telephone number is (571)272-4793. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tyler J. Cheryl can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/THO V DUONG/
Primary Examiner, Art Unit 3744